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Chapter 7: Researching inter-organizational collaboration using RO-AR

Siv Vangen

Introduction

This chapter focuses on the application of Research Oriented Action Research (RO-AR) to research inter-organizational collaboration within and across the public and non-profit sectors. RO-AR is a phenomenological action research methodology developed by Colin Eden and Chris Huxham (1996, 2006) which they and others have used to research aspects of management and organizations generally and inter-organizational collaboration specifically; the latter being the focus here. To that end, this chapter draws on a program of empirical research into governing, leading and managing collaborations that has been ongoing since 1989, and which has relied primarily on RO-AR. As a program of research, it is concerned with the development of conceptual knowledge that can inform practice and which has accumulated into the still evolving theory of collaborative advantage (TCA) (Huxham and Vangen 2005; Vangen and Huxham 2014). The aim in this chapter is to provide a brief introduction to RO-AR and to explore its applicability to research on collaboration.

Action Research, of which RO-AR is a particular type, was pioneered in the United States in the 1940s, most notably by Kurt Lewin (1946). Lewin argued that research for social practice needs to be concerned with 'the study of general laws ... and the diagnosis of specific situations' (36). He pointed, among other things, to the need to design methods for recording

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ill-structured data and to focus on the relationship between perception and action through taking an interpretist approach to research. In a similar vein, action research aimed at understanding organizations and organizational change began at the Tavistock Institute in the United Kingdom (UK) in 1947. With the aim of conducting research and developing knowledge, the Tavistock Institute developed new participative approaches to organization change and development. In the years that have followed, a number of related approaches have emerged including *action science* (Argyris, Putnam, and Smith 1985), *action inquiry* (Torbert 1976), *action learning* (Mwaluko and Ryan 2000; Revans 1982), *appreciative inquiry* (Cooperrider and Srivastva 1987; Cooperrider, Whitney, and Stavros 2008) and *participatory action research* (Argyris and Schon 1991; Whyte 1991). Given the growth in popularity of these kinds of research methods, the literature is unsurprisingly both large and somewhat confusing. Nevertheless, and notwithstanding inherent differences, these methods all involve learning from interventions in organizations with the purpose of bringing about change and advancing knowledge. A distinguishing feature between them is the relative emphasis on *change* (or practical transformation) and the development of more *general knowledge* (i.e. theory). The *primary purpose* of the systematic engagement with action in praxis may be the immediate development of an individual, an organization or a community (e.g. via appreciative inquiry or action learning) or it may be to inform the development of theory on the aspect of management or organizations that is being researched, as is the case with RO-AR. The validity of RO-AR, however, rests fundamentally on the intervention being useful in practice. This close relationship with practice enhances the potential of a theory ultimately developed to inform other contexts. Eden and Huxham distinguish RO-AR from other action research approaches in the following ways (2006: 388):

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- from organizational intervention projects that do not satisfy characteristics of *rigorous research*
- from research within an organization that does not satisfy characteristics of *action orientation*
- from forms of action research that do not have research output as their primary *raison d'être*.

The aim of this chapter is to highlight key features of RO-AR and to show how it may be used to produce good research on collaboration. In what follows, we look at the relevance of RO-AR to research on collaboration, provide an account of the application of the method in developing the theory of collaborative advantage, along with an overview of issues pertaining to data capture and analysis. The chapter also offers a brief evaluation of the method and some thoughts on rigor and relevance for researchers who may wish to apply the methods in future research on collaboration.

The relevance of the method

Over the last three decades, organization and management theory has increasingly covered a range of new topics and organizational forms, including inter-organizational collaboration and networks (Buchanan and Bryman 2007; Cunliffe 2011). These developments have resulted in new ways of researching and theorizing the complexity of organizational life (Cunliffe 2011; Jarzabkowski et al. 2013) alongside considerable methodological inventiveness (Buchanan and Bryman 2007), a renewed interest in the application of phenomenological research (Gill

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2014), the use of grounded theory (O'Reilly, Paper, and Marx 2012), and increasing popularity of some qualitative research designs, including action research (Aguinis et al. 2009; Huxham and Vangen 2003). In terms of the relevance of RO-AR for researching collaboration and developing contextualized theory to inform practice, the characteristic of the context of collaboration and the ability of the method to capture that context are clearly important factors.

With regards to context, public organizations, along with their non-profit and private sector partners, typically collaborate to address 'wicked' and 'relentless' problems (Rittel and Webber 1973; Weber and Khademian 2008) that sit in the inter-organizational domain (Trist 1983) beyond individual organizations' capabilities to tackle them effectively on their own (Vangen and Huxham 2014). Collaborative arrangements typically aspire for organizations to combine their resources – including their experiences, expertise, assets, cultures and values – in ways that allow them to achieve something that none of them could achieve on their own; they aim to create synergies and collaborative advantage (Gray 1989; Lasker, Weiss, and Miller 2001; Huxham and Vangen 2005; Quick and Feldman 2014; Bryson, Crosby, and Stone 2016). Fundamentally, that creation of synergy and advantage requires collaborative arrangements that simultaneously protect and integrate the partners' uniquely different resources that are brought to bear on their joint purpose (Vangen 2017a). Thus, collaborative partners typically deliver services and remits within traditional, vertical, command-and-control relationships, while they simultaneously participate in collaborative relationships that support the delivery of their joint goals (Huxham and Vangen 2005; Ospina and Foldy 2015; Ospina and Saz-Carranza 2010; Quick and Feldman 2014; Vangen and Huxham 2012). Collaborative contexts as such typically comprise a combination of both autonomous

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organizational hierarchies and collaborative governance structures. Moreover, such contexts are highly dynamic as they are subject to changing public policies and varying stakeholder engagement and preferences (Huxham and Vangen 2000; Cropper and Palmer 2008; Thomson and Perry 2006; Quick and Feldman 2014). For these reasons, a collaborative context is typically a complex web of overlapping, dynamic, hierarchies and systems that comprise competing designs and processes, all of which are necessary to deliver collaborative advantage. They are, in other words, inherently paradoxical in nature and characterized by contradictions and tensions (Vangen 2017a).

The context of collaboration clearly has implications for the extent to which methods are appropriate for empirical research and contextualized theory development. Certainly, researchers have argued that mainstream theories cannot capture adequately the complexity of collaborative contexts and have begun increasingly to use alternative methods and multi-paradigm approaches (Clark-Hill, Li, and Davies 2003; Das and Teng 2000; Gibbs 2009; Ospina and Saz-Carranze 2010; Zeng and Chen 2003). RO-AR sits within the phenomenological and interpretive paradigms (Kuhn 1970) and is a type of ethnography in as far as it relies primarily on naturally occurring data (Galibert 2004; Golden-Biddle and Locke 1993). The method itself does not demand a particular ideological perspective; rather, as it relies on an action-oriented intervention that is useful in practice, it requires the acceptance of the management ideologies of those being researched. The research is designed around a *practice-oriented agenda* rather than a research-focused ontological or ideological position. In as far as the research aims are concerned, an important assumption is that individuals' perceptions of reality are reflected in their actions and hence that data collected about their actions better reflect their 'theory in use' rather than their 'espoused theories' (Argyris 1977).

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This then enhances the relevance of the method when the aim is (as is the case for the TCA) to develop contextualized practice-oriented theory. Ideological perspectives, about for example the empowerment and participation of particular stakeholder groups, are important in some types of action research, but in RO-AR these are only important in as far as they are relevant to the practice-oriented agenda. This position is akin to a practice ontology which requires 'a tolerance for complexity and ambiguity' and engagement with organizational life through 'observing and working with practitioners' (Feldman and Orlikowski 2011). RO-AR, alongside other forms of qualitative research that engage with practice, is particularly appropriate for developing contextualized theory that relates closely to practice (Eden and Huxham 2006; Huxham and Hibbert 2011; Pettigrew 1997).

Method application

In essence, the RO-AR method entails interpretive theorizing from data gathered during organizational interventions on matters that are of genuine concern to the organizational participants and over which they need to act (Eden and Huxham 2006; Huxham and Vangen 2003). When RO-AR is used for research on collaboration, it involves learning from interventions in collaborative contexts, with the dual purpose to bring about a practical transformation and develop conceptual knowledge. The researcher's intervention is thus a key intrinsic part of the research design (Gill and Johnson 1997). The intention of a planned intervention is to learn from organizational participants' actions as well as having a direct influence on their future actions with regards to the subject of the research. Importantly, the research outputs that can ultimately be gained from the intervention is the researcher's reason

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for getting involved. The validity of the method, however, rests on the intervention itself being driven by a genuine need in a practice context. As can be gleaned from the examples that follow below, interventions therefore are often initiated by a practitioner rather than a researcher (see also Rapoport 1970).

The research program that gradually emerged into the (still evolving) theory of collaborative advantage (TCA) has included interventions in a large number and variety of collaborative contexts. It has involved a large number of participants, including directors of collaborations, partnership managers, managers in public, private and non-profit organizations involved in collaborations, and representatives of specific stakeholder groups across the UK and (to a limited extent) elsewhere. The collaborative contexts have ranged from simple dyads to complex international networks and have spanned public policy, including health, area development and regeneration, children services, education, social welfare, the environment and many more. It has involved my colleagues and I as researchers acting in a variety of capacities, including supporting individuals seeking to develop particular collaborations and inter-organizational governance forums, designing and facilitating collaborative seminars, workshops and leadership development events, contributions to practice seminars and conferences, direct participation in collaborations both as participants and as initiators and leaders, and contributing to policy development. One key focus in this program is to explore why collaboration often leads to inertia, rather than advantage, and what this means in terms of how practitioners involved might act in order to increase their effectiveness. Other specific foci have been on the nature of governance structure and leadership that can most effectively bring about positive outcomes in collaborative contexts. The aimed for output has been, and continues to be, theory that can inform governing, leading and managing collaboration in

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practice. A key concern therefore is always to design a research process that can facilitate a link between theory and practice. This aim is consistent with Whyte (1991: 8) who stated that 'it is important, both for the advancement of science and for the improvement of human welfare, to devise strategies in which research and action are closely linked'.

A founding block in the TCA research program has been the development of 'themes in collaboration' (Vangen 1992, 1998) – these are 'in vivo' labels (Glaser 1992; Strauss and Corbin 1998) given to a broad grouping of issues raised repeatedly by practitioners as causing anxiety and rewards. These theme labels are portrayed in Figure 7.1. Consistent with the aim to develop better contextualized practice-oriented theory, the themes guide the development of the TCA (Vangen and Huxham 2010, 2014). An ongoing research aim therefore is to develop a deeper understanding of the challenges related to each theme, including the relationships between them, and to conceptualize this in ways that can develop theory on collaboration *and* inform practice. The examples below illustrate how RO-AR was used to develop three such themes relating to goals, culture and governance (leadership).

<FIGURE 7.1 HERE>

As RO-AR projects have this dual purpose of practical transformation and theoretical development, it follows that each intervention is not designed around a specific research question, but is guided by a need in practice. The theory, including the conceptualizations pertaining to the various themes, is developed incrementally from a range of interventions that

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vary from long-term ones, lasting for several years, to short, one-off events. For illustrative purposes, three different types of interventions are outlined briefly below.

The first example involved an alliance of approximately 100 public and non-profit organizations working on different aspects of poverty alleviation in Scotland. At the time of our involvement, the alliance had a newly formed working group comprising eight public agencies and non-profit organizations committed to working jointly on children and poverty. My colleagues and I were asked by the director to design an intervention that would help the group form, and the members to commence their joint work. It was agreed that we would facilitate a series of workshops that would help the members identify key issues and agree on a direction for their joint work. In preparation for the workshops, and to help ensure that the members' diverse areas of expertise and experience were represented adequately, it was agreed that I would interview each member twice about their views of what the collaboration should aspire to achieve.

In this particular intervention, I captured the interviews using 'cognitive mapping', which was shared with and elaborated upon in the second interview. These maps were then entered into the Decision Explorer software, and organized into a 'group map' which effectively included all members' expressed values, beliefs and goals relating to the collaboration's activities. This aggregated model formed the basis for discussion in a series of four workshops (facilitated by a colleague), during which participants were involved in clarifying, negotiating and reviewing the goals identified by the analysis in the light of past experience and considering and agreeing future actions. The model was amended during workshops as understandings were

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clarified and new ideas emerged. For the participants, the intervention ended after the fourth workshop, when it was felt that sufficient agreement on key issues and goals for the joint work had been reached. In terms of the research, though this initial work yielded a preliminary conceptual framework on goals in collaborative context, the goals theme was developed over a number of years, and drawing on data gathered via a number of subsequent interventions in different collaborative contexts. A comprehensive framework on the goals was eventually published some 17 years later. The framework and a detailed outline of the research approach including the cognitive mapping can be found in Vangen and Huxham (2012).

Thankfully, not all conceptual development from RO-AR take that long! As is usual with RO-AR, however, most of the 'collaboration themes' have been developed incrementally from data gathered from a number of interventions spanning a number of years. The second example, which has thus far informed the development of the cultural diversity theme is, however, an exception because the specific opportunity yielded exceptionally rich empirical data. The conceptualizations of that theme developed from an intervention in one large UK-based organization that collaborates with many other organizations across the world. The intervention took place following a request from a senior manager about help with addressing challenges experienced by the individuals who manage these various collaborations on behalf of the organization. Following agreement with the participants, the intervention entailed a series of four in-house development events which focused on exploring ways of understanding and managing key challenges pertaining to the collaborations that they managed. Thirty-five managers participated in these events.

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The first three events all began with a brief introduction to relevant TCA themes (divergent goals, power and trust, and structural ambiguity respectively) followed by facilitated activities in which the participants explored a theme in relation to their own experiences. While the participants managed a range of different partnerships they all had a level of shared understanding gained from working in the same organization. It was therefore appropriate to design activities that enabled individuals to share and make sense of the challenges that they were experiencing. Each event closed with a plenary discussion encouraging further reflection and consolidation of learning (for them and me) facilitated (I believe) by my understanding of collaboration gained over a number of years. In terms of data capture, each activity involved them writing on post-its and flip-charts and I took notes during and immediately after each event. I also produced a brief report following each event.

The fourth event was different. It became increasingly clear that cultural diversity was a key theme for the organization participants. And at that time, in my judgement, there was no extant conceptual model on managing cultural diversity that could inform adequately the design of a 'theory into practice' activity similar to those of the first three events. In preparation to this event therefore, we agreed that I would interview individuals about their experiences of culture in the collaborations that they manage. I used an open-ended, unstructured format which adhered to the principle that initial temporary suppression of pre-understanding would allow for new and alternative ways of understanding a phenomenon, which in turn can facilitate the extension of theory (Gummesson 1991). It thus allowed me to incorporate participants' views of what cultural diversity is and what role it plays in the collaborations that they manage. During the interviews, which lasted between 60 and 90 min, individuals talked freely about their current experiences at a time when it was necessary for

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them to take action rather than purely reflect on events of the past. This resulted in a large amount of reliable, detailed and subtle data – including examples of practices they use to address issues associated with cultural diversity. Apart from the significantly larger number of participants, the process of recording and organising the interview data was similar to that used with the poverty alliance example as outlined above. Data analysis identified key challenges relating to the management of cultural diversity and these then informed the design of the activities explored and elaborated upon with the participants during the fourth development event. The theoretical conceptualizations that emerged later from this intervention can be found in Vangen and Winchester (2014) and Vangen (2017a, 2017b).

During the course of developing the TCA, we have also used RO-AR alongside other forms of qualitative research. This third example is from a funded project where the stated research aim was to explore the governance of partnerships. Following an introduction from the Chief Executive of a voluntary organization with whom we had an established relationship, we began to work with the Head of the City Council's Regeneration Team who was leading the implementation of a new neighbourhood regeneration strategy for the City Council. The strategy was to be implemented collaboratively with a number of public and non-profit organizations. The project involved many action research elements, including my colleagues and I acting as 'a sounding board' to the Head of the Regeneration Team (who consequently significantly changed her approach to the implementation of the strategy) and us actively facilitating workshops for collaboration participants. Yet, for a variety of reasons, the project also entailed standard qualitative data collection methods such as semi-structured interviews, participation in and observation of workshops, observation of meetings, obtaining documentation, informal conversations, e-mails as well as meetings with key individuals. In

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many ways, the design that emerged offered the best of both worlds: the ability to capture data about key individuals' actions *and* having the convenience of 'standard' data capture for research purposes. The outputs from the governance project can be found in Vangen, Hayes and Cornforth (2015) and Cornforth, Hayes and Vangen (2015).

The three examples outlined above were all quite different in terms of the interventions, data gathering and analysis, and this of course is typical of actions research as it is designed around a practice agenda. Yet, from the perspective of research they also had the aim to ultimately produce practice-oriented theory about collaboration in common. Fundamentally, they all met the RO-AR requirements of rigorous research, action orientation and research output as the primary *raison d'être*. More detailed descriptions of the methods used in these three examples can also be found in the articles where they were published.

Data capture and analysis

The issues of data capture and analysis have already been alluded to in the previous section. In RO-AR, as highlighted in the examples, the data capture and analysis are integral parts of the intervention. Data collection and analyses are undertaken concurrently, in a developmental fashion, which informs the intervention and promotes the emergence of theory grounded in empirical data (Eisenhardt 1989; Marshall and Rossman 1989). The data so gathered are typically qualitative in nature, with the analyses undertaken being qualitative, inductive and developmental (Burrell and Morgan 1997; Cassell and Symon 1994; Gill and Johnson 1997).

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While RO-AR, as a type of ethnography, relies primarily on naturally occurring data, it can also include interviews, focus groups and questionnaires where this is a natural part of the intervention. What sets this data collection apart is the aim to uncover issues of relevance to the specific intervention, rather than a specific research question. While interviews, for example, can take different formats, they do not generally include participants responding retrospectively to a set of questions derived from extant research. So the data collected is 'naturally occurring' to the extent that the focus is on issues that will need to be acted upon rather than events of the past.

As with any empirical research, deliberate and systematic data collection is essential, whether it be data collected naturally as part of the intervention (e.g. notes made on flipchart at a meeting) or data collected in parallel to the intervention but for research purposes only (e.g. reflective notes made by the researcher). Importantly, the specific intervention role-played by the researcher will affect what data are available for collection, and the history, context and politics of the intervention will be important to the interpretation of that data. Throughout the many interventions that have formed part of the TCA program, the expressed experiences, views, action-centred dilemmas, and actual actions of participants have been recorded as research data in a variety of ways:

- *by participants*: flipcharts, notes, post-its and (occasionally) anonymous but formally collected feedback on interventions
- *by researchers*: detailed and reflective notes during or immediately following events, memos, meetings and conversations, diaries and interview data capture (including digital recording, notes and cognitive maps)

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- *by participants and researchers*: records of interactive facilitated activities during an intervention (e.g. Decision Explorer group maps or 'cluster' analysis) and e-mail exchanges
- *of participants and researchers*: video and tape recordings of interventions.

The main principle adhered to has always been to capture data as accurately as possible. It has included taking very detailed notes on participants' views and responses, conversations between them and with us, including views expressed and decisions made, any implications that the intervention is having in practice (negative as well as positive and who is affected), our impressions of what participants appear engaged by, how they react to different suggestions including theoretical frameworks and so on). Data have also been collected via video and digital recordings, albeit not as standalone devices. When appropriate, we have given individuals the opportunity to verify the data that we have collected, and we have on occasion given them the opportunity to feedback anonymously. The latter was particularly important when we used a form of Participatory Action Research (PAR) alongside RO-AR; PAR involves practitioners in the research design which changes the relationship between the researcher and the researched as well as the interest in and *ownership* of the data (Huxham and Vangen 2003). Over the years, the various interventions have yielded a vast amount of data on many different aspects of collaboration. Typically, as has been illustrated in the examples above, theoretical insight has emerged incrementally from interpretive analysis of the data following individual and sequential interventions.

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In the phenomenological paradigm, the development of theory results from a process of inductive analysis of empirically collected data (see for example, Bryman and Bell 2015; Easterby-Smith, Thorpe, and Lowe 1991). RO-AR lends itself to the development of 'emergent theory' (Eisenhardt 1989), which has some similarities with 'grounded theory' (Glaser and Strauss 1967; Strauss and Corbin 1998). Eden and Huxham (2006) particularly stress the theory and practice cycle:

(RO-AR is) concerned with a system of emergent theoretical conceptualizations, in which theoretical constructs develop from a synthesis of that which emerges from the data and that which emerges from the use in practice of the body of theoretical constructs which informed the intervention and research intent. (396)

In TCA, there is a specific focus on the development of theory that is meaningful for use in practice. Ultimately, this yields conceptualizations that capture the complexities of organizational life through the 'highlighting of issues, contradictions, tensions and dilemmas', rather than through generating synthetic explanatory variables (Langley 1999).

Theorizing practice-oriented research in ways that meet the dual requirement of practice and the development of a field of knowledge is not straightforward (Pettigrew 1997; Eden and Huxham 2006). Data analysis and subsequent development of theoretical constructs will not proceed in a linear, neat fashion, but more likely the process will be cyclical, creative, messy, fascinating, time-consuming and at times perhaps even frustrating and ambiguous. As the output is not intended to be 'context bound' (Greenwood and Levin 1998: 75), research findings need to be presented in language that is not situation-specific. This requirement is

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similar to generating outputs from case studies in a manner that allows them to become theoretical vehicles for the examination of other cases (Yin 2003). Using a reflexive approach when interpreting the data can also aid understanding of how the emergent conceptualizations can both be representative of the situation in which they were generated and be applicable in others (Alvesson and Sköldbberg 2000). Deriving useful conceptualizations is inevitably an iterative process that entails experimenting with different possible ways of writing concepts (Eden and Huxham 2006; Huxham and Hibbert 2011).

Given the aim and nature of the analysis as outlined above, and illustrated in Figure 7.2, it follows that there cannot be a predefined method or a single 'best practice' approach to analysis.

<FIGURE 7.2 HERE>

For the purpose of research (on collaboration) rather than practice, analysis usually involves a number of steps, which are repeated until a specific conceptualization has been completed, including:

1. A close examination of data collected for research purposes from one or more interventions to identify items that are relevant to a specific theme (e.g. trust, leadership or identity) and which can then be included in the analysis.
2. A review, including a process of triangulation, of the selected data items to look for emerging themes, patterns and categories.

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3. A sense-making process to ascertain if a conceptual framework can be developed.
4. An iterative process of writing and data analysis to develop conceptual constructs and frameworks (this has on occasion spanned years).
5. A review of literature to inform sense-making and conceptual development.

With respect to step 2, it is worth noting that the revisiting of different data sources within the cyclical process illustrated in Figure 7.2, offers powerful means of triangulating the data (Eden and Huxham 2006). A traditional definition of triangulation involves the act of bringing more than one source of data to bear on a single point (Marshall and Rossman 1989). In RO-AR, data from different sources can be used to corroborate, elaborate or illuminate the research in question. Within RO-AR, triangulation can make use of the data collected in the various ways listed above. Importantly, the data are not expected to triangulate upon a single point per se but, rather, the lack of triangulation should be used as a dialectical device for generating new concepts (Eden and Huxham 2006).

With respect to step 5, in the TCA, literature has informed both the development of the conceptual framework (see for example Huxham's [2003] outline of the 'leadership theme' theory development) and the process of developing practice-oriented theory (see for example my article on using the paradox lens for this purpose; Vangen 2017a). Given the large volume of variously captured data, and the iterative, inter-related analytical process outlined above, any software that can allow the amount and variety of data flexibly will aid the inductive analysis process. In developing the TCA, we have primarily used Decision Explorer developed by Eden and Ackermann (1998). Where we have used NVivo, it has tended to be

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for data storage rather than analysis per se. In general, any tool that encourages creativity rather than rigidity in analysis is likely to be more useful. Readers who would like more detail about specific analysis can also refer to articles where TCA has been developed gradually over the last two decades.

A brief evaluation of the method

It has been argued in this chapter that inter-organizational collaboration is a complex phenomenon and that RO-AR is a method that is appropriate for empirical research and theory development. In particular, it has been argued that the close connection between practice and research that is necessary in RO-AR render the method particularly appropriate for developing contextualized practice-oriented theory. This is a specific aim pursued in the development of the theory of collaborative advantage, which has been drawn on for examples throughout this chapter.

As a variety of phenomenological research, RO-AR undoubtedly establishes a close connection between the researcher and the organizational participants. As such, it undoubtedly has the potential to provide a rich, contextual insight that cannot be gained easily in other ways. Yet, interventions in organizations requires a high level of trust between the researcher and the practice participants; there is a risk associated with any intervention in any organizational context, including a risk that the intervention can result in negative rather than positive implications in practice. There is also a risk that the intervention will not yield useful data in as far as advancing the research agenda is concerned. In RO-AR therefore, the

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researcher will inevitably take a leap of faith. In terms of the content of the 'naturally occurring' data, the researcher will usually have to rely on interventions in multiple organizational contexts. In comparison, a case study approach (Yin 2003) can provide the researcher with greater control over the data collected and a better sense at the outset of whether the case study will surface data of relevance to a specific research question.

However, as the data captured in RO-AR are 'naturally occurring', it can provide the kinds of insight that can yield better contextualized theoretical data in the context of collaboration.

RO-AR (like inter-organizational collaboration itself) is resource- and time-consuming and not a panacea for research in the collaboration context; it would be inappropriate for many research agendas. It is not likely to be favourable when other methods can adequately capture the research aims. This is likely to be the case, for example, when a researcher wishes to pursue a narrowly focused research question or test out the applicability of a specific theory in the context of collaboration. It does, however, offer particular opportunities for better contextualized practice theory development that other methods do not. Each intervention can provide rich data about what people do and say, and what theoretical frameworks and concepts are used and found useful, when organization participants are faced with a genuine need to take action. RO-AR therefore has the potential to provide new and unexpected insights that are important for theoretical developments (Whetton 1989).

Issues of rigour and relevance in future applications

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The main validity concern facing RO-AR is the dilemma of rigour and relevance (Argyris and Schon 1991; Gill and Johnson 1997; Rapoport 1970). Interventions in organizations will necessarily be one-off and so it would not be possible to demonstrate rigour via repeatability. In terms of relevance, the phenomenological argument is that explanations of naturally occurring phenomenon are relatively worthless unless they are grounded in observation and experience (Gill and Johnson 1997). The validity of RO-AR therefore can be argued from the point of view that it takes into account the exploratory nature of the research and the intention to investigate 'contemporary, naturally occurring activities' (Yin 2003). As with any qualitative research design, it will be important to demonstrate that it was planned and executed in a methodologically rigorous manner (Cassell and Symon 1994). In RO-AR, it is unlikely to be possible to define in detail, every single step of the research. Yet, it will be important to provide enough detail for the research to be assessed according to whether it was likely to provide a thorough, precise and accurate understanding of the phenomenon researched (Marshall and Rossman 1989).

In terms of the validity of the emergent theory, the arguments about relevance and rigour are closely related. Whether or not theory generated from RO-AR is relevant depends largely on whether the views, experiences and actions of organization participants – on issues that were of genuine importance in practice – are accurately captured and accounted for in the development of the theory. It may be argued that the variety of data that can be captured via RO-AR, including the participants' ability to comment on that data, can help ensure that their views are accurately captured. Whether or not participants' views are reflected in the development of the research relates to the way in which the data are analysed. The validity of the emerging theory thus relates to the methodological soundness and rigour by which the

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data are captured and analysed. Scientific rigour may be argued from the point of view that RO-AR encourages the researcher to undertake a rigorous process of checking interpretation of meaning with the practitioners and, in that respect, the standard of accuracy of emerging theories may be enhanced (Whyte 1991). That process of rethinking both theory and practice strengthens both theory and practice, and thus helps to ensure the validity of the theory (Eden and Huxham 2006; Gill and Johnson 1997; Whyte 1991).

Glaser and Strauss (1967) propose two criteria for evaluating the quality of a theory. They suggest that the theory should be sufficiently analytic to enable some generalization to take place, but at the same time it should be possible for people to relate the theory to their own experiences, thus sensitizing their own perceptions. The generalization measure of usefulness and validity relates to the transferability of the theory (Lincoln and Guba 1986). The burden of demonstrating the applicability of one set of findings rests more with the investigator, who would make that transfer, rather than with the original investigator (Lincon and Guba 1986). For the RO-AR researcher, an important aim therefore is to allow the reader to judge the relevancy of their generalization in order to assess whether or not it is applicable to other contexts (Glaser and Strauss 1967; Marshall and Rossman 1989).

Further reading

Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.

Eden, C., and C. Huxham. 2006. "Researching organizations using action research." In *Handbook of organization studies*, 2nd Ed., edited by S. Clegg, C. Hardy, W. Nord and T. Lawrence, 388-408. London: Sage.

Huxham, C. 2003. "Theorizing collaboration practice." *Public Management Review* 5 (3): 401-423.

Huxham, C. and P. Hibbert. 2011. "Use matters ... and matters of use: building theory for reflective practice." *Public Management Review* 13 (2): 273-291.

Huxham, C., and S. Vangen. 2003. "Researching organizational practice through action research: case studies and design choices." *Organizational Research Methods* 6 (3): 383-403.

Huxham, C. 2003. "Action research as a methodology for theory development." *Policy and Politics* 31 (2): 239-48.

Reason, P. and H. Bradbury. 2001. *Handbook of action research: participative inquiry and practice*. London: Sage

Vangen, S. 2017. "Developing practice-oriented theory on collaboration: a paradox lens." *Public Administration Review*. 77(2),263-272.

References

Aguinis, H., C.A. Pierce, F.A. Bosco, and I.A. Muslin. 2009. "First decade of organizational research methods: trends in design, measurement, and data-analysis topics." *Organizational Research Methods* 12 (1): 69-112.

Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.

Argyris, A. 1977. "Double loop learning in organizations." *Harvard business Review* September.

Argyris, C., R. Putnam, and D.M. Smith. 1985. *Action science*. San Francisco: Jossey-Bass.

Argyris, C. and D. Schon. 1991. "Participatory action research and action science compared: a commentary." In edited *Participatory action research*, by W. Whyte, 85-97. London, SAGE.

Alvesson, M. and K. Sköldbberg. 2000. *Reflexive methodology: new vistas for qualitative research*. London: Sage.

Bryson, J. M., B.C. Crosby, and M.M. Stone. 2015. "Designing and implementing cross-sector collaborations: needed and challenging." *Public Administration Review* 75 (5): 647-663.

Buchanan, D.A., and A. Bryman. 2007. "Contextualising methods choice in organizational research." *Organizational Research Methods* 10 (3): 483–501.

Burrell, G., and G. Morgan. 1979. *Sociological paradigms and organisational analysis*. London: Heinemann.

Bryman, A. and E. Bell. 2015. *Business research methods*, 4th Ed. Oxford: Oxford University Press.

Cassell C. and G. Symon. Eds. 1994. *Qualitative methods in organizational research. A practical guide*. London: SAGE.

Clarke-Hill, C., H. Li, and B. Davies. 2003. "The paradox of co-operation and competition in strategic alliances: towards a multi-paradigm approach." *Management Research News* 26 (1): 1–20.

- Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.
- Cooperrider, D.L. and S. Srivastva. 1987. "Appreciative inquiry in organizational life". In *Research in Organizational Change and Development*, Vol. 1, edited by R.W. Woodman and W.A. Pasmore, 129–169. Stamford, CT: JAI Press.
- Cooperrider, D.L., D.W. Whitney, and J.M. Starvos. 2008. *Appreciative inquiry handbook: for leaders of change*, 2nd ed. Brunswick: Crown Custom Publishing, Inc.
- Cornforth, C. J.P. Hayes, and S. Vangen. 2015. "Understanding changes in the governance of public – nonprofit collaborations: collaborative windows, collaborative entrepreneurs and internal tensions." *Nonprofit and Voluntary Sector Quarterly* 44 (4): 775-795.
- Cropper, S. and I. Palmer. 2008. "Change, dynamics, and temporality in inter-organizational relationships." In *The Oxford handbook of inter-organizational relations*, edited by S. Cropper, M. Ebers, C. Huxham, and P.R. Smith. Oxford: Oxford University Press.
- Cunliffe, A. 2011. "Crafting qualitative research: Morgan and Smircich 30 years on." *Organizational Research Methods* 14 (4): 647–673.
- Das, T.K., and B.S. Teng. 2000. "Instabilities of strategic alliances: An internal tensions perspective". *Organization Science* 11 (1): 77–101.
- Easterby-Smith, M., R. Thorpe, and A. Lowe. 1991. *Management research: an introduction*. London: SAGE.
- Eden, C. and F. Ackermann. 1998 *Making strategy: The journey of strategic management*. London: Sage Publications.
- Eden, C. and C. Huxham. 1996. "Action research for management research." *British Journal of Management* 7 (1): 75-86.

- Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.
- Eden, C. and C. Huxham. 2006. "Researching organizations using action research." In *Handbook of organization studies*, 2nd Ed., edited by S. Clegg, C. Hardy, W. Nord, and T. Lawrence, 388-408. London: Sage.
- Eisenhardt, K.M. 1989. "Building theories from case study research." *Academy of Management Review* 14: 532-550.
- Feldman, M. S. and W. J. Orlikovski. 2011. "Theorizing practice and practicing theory." *Organization Science* 22 (5): 1240-1253.
- Galibert, C. 2004. "Some preliminary notes on actor-observer anthropology." *International Social Science Journal*, 56: 455-466
- Gibbs, J. 2009. "Dialectics in a global software team: negotiating tensions across time, space and culture." *Human Relations* 62 (6): 905-935.
- Golden-Biddle, K., and K. Locke. 1993. "Appealing work: an investigation of how ethnographic texts convince." *Organization Science* 4: 595-616.
- Gill, M. 2014. "The possibilities of phenomenology for organizational research." *Organizational Research Methods* 17(2):118-137.
- Gill, J. and P. Johnson. 1997. *Research methods for managers*, 2nd Ed. London. Paul Chapman Publishing Ltd.
- Glaser, B.G. 1992. *Basics of grounded theory*. Mill Valley CA: Sociology Press.
- Glaser, B., and A. Strauss. 1967. *The discovery of grounded theory: strategies for qualitative research*. New York: Aldine de Gruyter.
- Gray, B. 1989. *Collaborating: finding common ground for multiparty problems*. San Francisco: Jossey-Bass.

- Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.
- Greenwood, D.J. and Levin, M. 1998. "Action research, science, and the co-optation of social research." *Studies in cultures, organizations and Societies*, 4(2):237-261.
- Gummesson, E. 1991. *Qualitative methods in management research*. Newbury Park, SAGE. Revised Ed.
- Huxham, C. 2003. "Action research as a methodology for theory development." *Policy and Politics* 31 (2): 239-48. Huxam 2006
- Huxham, C., and P. Hibbert. 2011. "Use matters ... and matters of use: building theory for reflective practice." *Public Management Review* 13 (2): 273–291.
- Huxham, C., and S. Vangen. 2000. "Ambiguity, complexity and dynamics in the membership of collaboration." *Human Relations* 53: 771–806.
- Huxham, C., and S. Vangen. 2003. "Researching organizational practice through action research: Case studies and design choices." *Organizational Research Methods* 6 (3): 383–403.
- Huxham, C., and S. Vangen. 2005. *Managing to collaborate: the theory and practice of collaborative advantage*. London: Routledge.
- Jarzabkowski, P., M. Smets, R. Bednarek, G. Burke, and P. Spee. 2013. "Institutional ambidexterity: leveraging institutional complexity in practice." *Research in the Sociology of Organizations* 39: 37–61.
- Kuhn, T. 1970. *The structure of scientific revolutions*, 2nd Ed. Chicago: The University of Chicago Press.
- Langley, A. 1999. "Strategies for theorizing from process data." *Academy of Management Review* 24: 691-710.

- Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.
- Lasker, R.D., E.S. Weiss, and R. Miller. 2001. "Partnership synergy: a practical framework for studying and strengthening the collaborative advantage." *The Millbank Quarterly* 79: 179–205.
- Lewin, K. 1946. "Action research and minority problems." *Journal of Social Issues* 2: 34-46.
- Lincoln, Y. and G. Guba. 1986. *Naturalistic inquiry*. London: SAGE.
- Marshall, S. and G.B. Rossman 1989. *Designing Qualitative Research*. London: Sage Publications.
- Mwaluko, G.S. and T.B. Ryan. 2000. "The systemic nature of action learning programmes." *Systems Research and Behavioral Science* 17: 393-401.
- O'Reilly, K., D. Paper, and S. Marx. 2012. "Demystifying grounded theory for business research." *Organizational Research Methods* 15 (2): 247–262.
- Ospina, S.M., and A. Saz-Carranza. 2010. "Paradox and collaboration in network management." *Administration and Society* 42 (4): 404–440.
- Ospina, S. M., and Erica G. Foldy. 2015. "Enacting collective leadership in a shared-power world." In *Handbook of Public Administration*, 3d Edition, edited by J. Perry and R.K. Christensen. Jossey-Bass.
- Pettigrew, A. 1997. "The double hurdles for management research." In *Advancements in organizational behaviour: essays in honour of Derek Pugh*, edited by T. Clarke. Aldershot: Ashgate.
- Quick, K.S., and M.S. Feldman. 2014. "Boundaries as junctures: collaborative boundary work for building efficient resilience." *Journal of Public Administration Research and Theory* 24: 673-695.

- Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.
- Rapoport, R. 1970. "Three dilemmas in action research." *Human Relations* 23 (6): 499-513.
- Revans, R.W. 1982. *The origins of growth of action learning*. Bickley, Kent: Chartwell-Bratt.
- Rittel, H. and M. Webber. 1973. "Dilemmas in a general theory of planning." *Policy Sciences* 4: 155-69.
- Strauss, A. and J. Corbin. 1998. *Basics of qualitative research*, 2nd ed. London: Sage.
- Torbert, W.R. 1976. *Creating a community of inquiry: conflict, collaboration, transformation*. New York: Wiley.
- Thomson, A.M. and J.L. Perry. 2006. "Collaboration processes: inside the black box." *Public Administration Review* 66 (S1): 20-32.
- Trist, E. 1983. "Referent organizations and the development of inter-organizational domains." *Human Relations* 36 (3): 269-284.
- Vangen, S. 1992. *Local community groups combating poverty: focusing on collaboration*. Glasgow: University of Strathclyde, MSc.
- Vangen, S. 1998. "Transferring insight on collaboration to practice." PhD, University of Strathclyde.
- Vangen, S. 2017a. "Developing practice-oriented theory on collaboration: a paradox lens." *Public Administration Review* 77(2),263-272.
- Vangen, S. 2017b. "Nurturing culturally diverse collaborations: a focus on communication and shared understanding." *Public Management Review* 19 (3): 305-325.
- Vangen, S. and C. Huxham. 2010. "Introducing the theory of collaborative advantage." In *The new public governance? Critical perspectives and future directions*, edited by S. Osborne, 163-164. London: Routledge.

- Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.
- Vangen, S., and C. Huxham. 2012. "The tangled web: unraveling the principle of common goals in collaborations." *Journal of Public Administration Research and Theory* 22: 731–760.
- Vangen, S. and C. Huxham. 2014. "Building and using the theory of collaborative advantage." In *Network theory in the public sector: building new theoretical frameworks*, edited by Robyn Keast, Myrna Mandell, and Robert Agranoff, 51-67. New York: Taylor and Francis.
- Vangen, S. J.P. Hayes, and C. Cornforth. 2015. "Governing cross-sector inter-organizational collaborations." *Public Management Review* 17 (9): 1237-1260.
- Vangen, S. and N. Winchester. 2014. "Managing cultural diversity in collaborations. A focus on management tensions." *Public Management Review* 16 (5): 686-707.
- Weber, E.P. and A.M. Khademian. 2008. "Wicked problems, knowledge challenges, and collaborative capacity builders in network setting." *Public Administration Review* 68 (2): 334-349.
- Whetton, D. 1989. "What constitutes a theoretical contribution?" *Academy of Management Review*, 14(4), 490-495. Whyte, W. ed. 1991. *Participatory action research*. London: SAGE.
- Yin 2003. *Case study research: design and methods*, 3rd ed. Thousand Oaks, CA: Sage.
- Zeng, M., and X.P. Chen. 2003. "Achieving cooperation in multiparty alliances: a social dilemma approach to partnership management." *Academy of Management Review* 28 (4): 587-605.

Vangen, S. (2019). Researching inter-organizational collaboration using RO-AR. In 'Researching Networks and Collaboration in the Public Sector: Essential research approaches, methodologies and analytical tools.' eds. Joris Voets, Robyn Keast and Christopher Koliba. 'London, Routledge, pp 125-141.

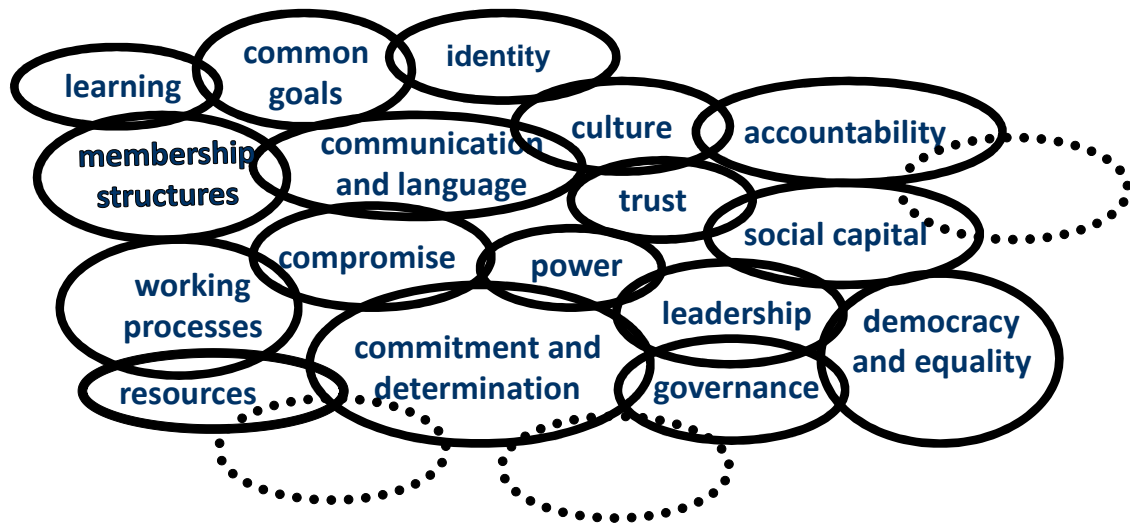


Figure 1: Collaboration Themes

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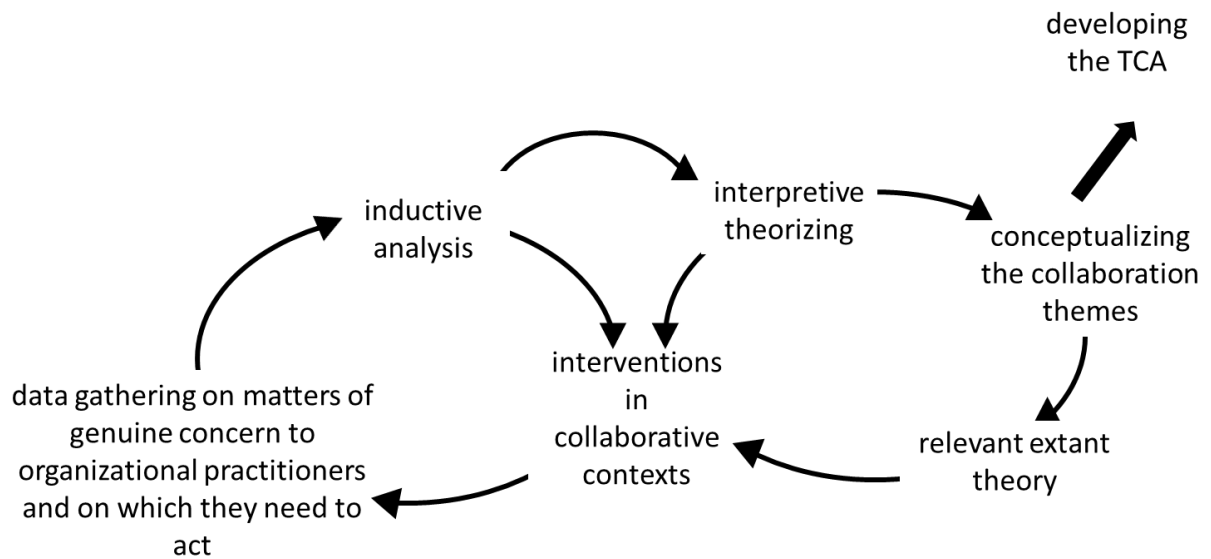


Figure 2: Inductive RO-AR analysis in developing the TCA